CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

An ISO 9001:2008 Certified Company

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

JAS-ANZ BSCIC ISO 9001 REGISTERED

Job No.: CTCE/BBMP/WNo.17/SKK/SDBC/Bitumen/2014-15 06.05.2014

BITUMEN DETERMINATION OF SEMI DENSE BITUMINOUS CONCRETE MIX

AS per IRC : SP : 11 - 1984

CLIENT	Asst. Executive Engineer, Yeshwanthapura Sub Division, BBMP,
AGENCY	Mr. Shivakumar K, Contractor, Bangalore.
NAME OF THE WORK	Providing and laying HDPE Water line In Mutyala Nagar Block-4 in J.P Park, Ward No. 17, BBMP, Bangalore.
REFERENCE	EE/RRND/Wo. No./232/2013-14 Dated: 07.02.2014
SAMPLE I/D	HDPE Water line in Mutyala Nagar Block-4 in J.P Park, Ward No. 17
DATE OF TESTING	06.05.2014

BITUMEN CONTENT DETERMINATION

Description	Trail 1	Trail 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	474	475
3. Weight of Asphalt and Mineral matter Extracted, g	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	26	25.00
7. Bitumen content in %	5.20	5.00
8. Average	5.10	

Civil Tech Consultants & Engineers Bangalore

Note:

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Job No.: CTCE/BBMP/WNo.17/SKK/SDBC/Bitumen/2014-15 06.05.2014

GRADATION DETERMINATION OF SEMI DENSE BITUMINOUS CONCRETE MIX

As per IS : 2386 and IRC : SP : 11 - 1984

CLIENT	**Asst. Executive Engineer,** Yeshwanthapura Sub Division, BBMP, Bangalore.
AGENCY	**Mr. Shivakumar K,** Contractor, Bangalore.
NAME OF THE WORK	Providing and laying HDPE Water line In Mutyala Nagar Block-4 in J.P Park, Ward No. 17, BBMP, Bangalore.
REFERENCE	EE/RRND/Wo. No./232/2013-14 Dated: 07.02.2014
SAMPLE I/D	HDPE Water line in Mutyala Nagar Block-4 in J.P Park, Ward No. 17
DATE OF TESTING	06.05.2014

GRADATION AFTER EXTRACTION

Sieve Size in mm	Trail 1				Specified Limits as per MORTH specification table 500-15 (Grading-2)
	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	
13.2	0	0	0	100	100
9.5	25.89	5.46	5.46	94.54	90-100
4.75	252.61	53.29	58.76	41.24	35-51
2.36	54.89	11.58	70.34	29.66	24-39
1.18	53.45	11.28	81.61	18.39	15-30
0.3	30.45	6.42	88.04	11.96	9-19
0.075	24.78	5.23	93.26	6.74	3-8

Sieve Size in mm	Trail 2				Specified Limits as per MORTH specification table 500-15 (Grading-2)
	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	
13.2	0	0	0	100	100
9.5	34.78	7.32	7.32	92.68	90-100
4.75	256.45	53.99	61.31	38.69	35-51
2.36	54.12	11.39	72.71	27.29	24-39
1.18	42.74	9.00	81.70	18.30	15-30
0.3	24.12	5.08	86.78	13.22	9-19
0.075	31.56	6.64	93.43	6.57	3-8

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Job No.: CTCE/BBMP/WNo.17/SKK/SDBC/AGG/2014-15 06.05.2014

Aggregate Gradation Test

IS : 2386 Part I

Client	**Asst. Executive Engineer,** Yeshwanthapura Sub Division, BBMP, Bangalore.
Agency	**Mr. Shivakumar K,** Contractor, Bangalore.
Name of the Work	Providing and laying HDPE Water line In Mutyala Nagar Block-4 in J.P Park, Ward No. 17, BBMP, Bangalore.
Reference	EE/RRND/Wo. No./232/2013-14 Dated: 07.02.2014
Sample I / D	Hot Mix Plant, Bangalore
Type of Mix	Semi Dense Bituminous Concrete (SDBC)
Date of Testing	06.05.2014

Total Weight of Sample: 5650 gm

SIEVE SIZE, mm	Weight Retained, gm	% Retained	Cummulative % Retained	% Passing	Grade-II As per MORTH	Remarks
13.2	0	0.0	0	100	100	Gradation satisfies Grade II MORTH specification
9.5	416	7.4	7.36	92.64	90-100	
4.75	3021	53.5	60.83	39.17	35-51	
2.36	721	12.8	73.59	26.41	24-39	
1.18	450	8.0	81.56	18.44	15-30	
0.3	383	6.8	88.34	11.66	9-19	
0.075	323	5.7	94.05	5.95	3-8	

Total Weight of Sample: 5550 gm

SIEVE SIZE, mm	Weight Retained, gm	% Retained	Cummulative % Retained	% Passing	Grade-II As per MORTH	Remarks
13.2	0	0.0	0	100	100	Gradation satisfies Grade II MORTH specification
9.5	374	6.7	6.74	93.26	90-100	
4.75	2961	53.4	60.09	39.91	35-51	
2.36	628	11.3	71.41	28.59	24-39	
1.18	431	7.8	79.17	20.83	15-30	
0.3	341	6.1	85.32	14.68	9-19	
0.075	511	9.2	94.52	5.48	3-8	

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